

CLAIMS

1. A scanner, comprising a touchscreen affixed to one outer surface of the scanner,
2 and wherein touch location information is generated indicating where the
touchscreen is touched, and wherein the touch location information is used to
4 select an area to scan.
2. A scanner, comprising:
2 a substantially transparent platen on a first side of the scanner;
a substantially transparent window on a second side of the scanner, opposite the
4 first side; and
a touchscreen affixed proximate to the substantially transparent window;
6 and wherein touch location information is generated in response to at least one
touch of the touchscreen, and wherein the touch location information is used
8 to select an area to scan.
3. The scanner of claim 2, wherein the area to scan is selected to encompass a figure
2 traced on the touchscreen by a user of the scanner.
4. The scanner of claim 2, wherein the area to scan is rectangularized.
5. The scanner of claim 2, wherein only touches occurring during a pre-determined
2 interval are considered in the selection of the area to scan.
6. The scanner of claim 5, wherein the pre-determined interval immediately precedes
2 initiation of a scan.
7. The scanner of claim 5, wherein the pre-determined interval is the ten seconds
2 immediately preceding initiation of a scan.

8. The scanner of claim 2, wherein only touches occurring after a reset operation are
2 considered in the selection of the area to scan.
9. The scanner of claim 2, further comprising scanner control logic, and wherein the
2 scanner control logic interprets the touch location information and selects the area
to scan.
10. The scanner of claim 2, wherein the scanner performs the following method:
2 performing a preview scan that results in a preview digital image;
analyzing the preview digital image using automated region detection; and
4 selecting as the area to scan an automatically-detected region that encompasses a
location of a touch of the touchscreen.
11. The scanner of claim 10, wherein performing the preview scan occurs before the
2 touch of the touchscreen.
12. The scanner of claim 10, wherein performing the preview scan occurs after the
2 touch of the touchscreen.
13. The scanner of claim 2, further comprising a liquid crystal panel interposed
2 between the touchscreen and the substantially transparent window, and wherein
the liquid crystal panel is used to provide user feedback about the selected area to
4 scan.
14. The scanner of claim 13, wherein user feedback is provided by switching at least
2 one liquid crystal element in the liquid crystal panel to a light-blocking state in
response to at least one touch of the touchscreen.

15. The scanner of claim 14 wherein liquid crystal elements nearest to locations where
2 the touchscreen is touched are switched to the light-blocking state.
16. The scanner of claim 14, wherein the liquid crystal elements switched to the light-
2 blocking state outline a perimeter of the area to scan.
17. The scanner of claim 16, wherein the perimeter is rectangularized.
18. A system, comprising:
- 2 a) a scanner, comprising
- a substantially transparent platen on a first side of the scanner;
- 4 a substantially transparent window on a second side of the scanner, opposite
- the first side; and
- 6 a touchscreen affixed proximate to the substantially transparent window; and
- b) a computer;
- 8 and wherein the computer and the scanner are in communication, and wherein
- touch location information is generated in response to at least one touch of the
- 10 touchscreen, and wherein the touch location information is used by the system
- to select an area to scan near the platen.
19. The system of claim 18 wherein the computer and scanner communicate through a
2 cable.
20. The system of claim 18 wherein the computer and scanner communicate
2 wirelessly.
21. The system of claim 18, wherein the touch location information is sent to the
2 computer, and the computer sends to the scanner configuration information

- derived from the touch location information, the configuration information
4 indicating the area to scan.
22. The system of claim 18, wherein the area to scan is selected to encompass a figure
2 traced on the touchscreen by a user of the system.
23. The system of claim 18, wherein the area to scan is rectangularized.
24. The system of claim 18, wherein only touches occurring during a pre-determined
2 interval are considered in the selection of the area to scan.
25. The system of claim 24, wherein the pre-determined interval immediately
2 precedes initiation of a scan.
26. The system of claim 24, wherein the pre-determined interval is the ten seconds
2 immediately preceding initiation of a scan.
27. The system of claim 18, wherein the system performs the following method:
2 performing a preview scan that results in a preview digital image;
transmitting the preview digital image to the computer;
4 analyzing the preview digital image in the computer using automated region
detection software; and
6 sending configuration information from the computer to the scanner specifying an
area to scan, the area to scan encompassing an automatically detected region
8 that encompasses the location of a touch of the touchscreen.
28. The system of claim 27, wherein performing the preview scan occurs before the
2 touch of the touchscreen.

29. The system of claim 27, wherein performing the preview scan occurs after the
2 touch of the touchscreen.
30. The system of claim 18, further comprising a liquid crystal panel interposed
2 between the touchscreen and the substantially transparent window, and wherein
the liquid crystal panel is used to provide feedback to a user of the system about
4 the area to scan.
31. The system of claim 30, wherein user feedback is provided by switching at least
2 one liquid crystal element in the liquid crystal panel to a light-blocking state in
response to at least one touch of the touchscreen.
32. The system of claim 31, wherein liquid crystal elements nearest to locations where
2 the touchscreen is touched are switched to the light-blocking state.
33. The system of claim 31, wherein the liquid crystal elements switched to the light-
2 blocking state outline a perimeter of the area to scan.
34. The system of claim 33, wherein the perimeter is rectangularized.
35. A method, comprising:
2 detecting at least one touch of a touchscreen affixed proximate to a substantially
transparent window on a first side of a scanner; and
4 selecting, based on the location of the at least one touch, an area to scan near a
substantially transparent platen on a second side of the scanner, opposite the first
6 side.
36. The method of claim 35, wherein:

2 detecting at least one touch of the touchscreen further comprises detecting the
tracing of a figure on the touchscreen;
4 and wherein selecting an area to scan further comprises rectangularizing the area
to scan to fully encompass the figure.

37. The method of claim 35, wherein only touches occurring during a pre-selected
2 interval before an initiation of a scan are considered.

38. The method of claim 37, wherein the pre-selected interval is a 10-second interval
2 immediately preceding the initiation of the scan.

39. The method of claim 35, further comprising performing a reset operation, and
2 wherein only touches occurring after the reset operation are considered.

40. The method of claim 35, performed entirely in the scanner.

41. The method of claim 35, wherein part of the method is performed in the scanner
2 and part of the method is performed in a computer that is in communication with
the scanner.

42. The method of claim 35, further comprising:
2 performing a preview scan that results in a preview digital image;
analyzing the preview digital image using automated region detection; and
4 selecting, as the area to scan, an automatically detected region encompassing a
location where the touchscreen was touched.

43. The method of claim 42, wherein performing the preview scan occurs after the
2 touch of the touchscreen.

- 2 44. The method of claim 42, wherein performing the preview scan occurs before the touch of the touchscreen.
- 2 45. The method of claim 42, wherein the step of analyzing the preview digital image is performed in a computer that is in communication with the scanner.
- 2 46. The method of claim 35, further comprising providing feedback about the selected area to scan using a liquid crystal panel interposed between the touchscreen and the substantially transparent window.
- 2 47. The method of claim 46, wherein providing feedback about the selected area to scan further comprises switching at least one element of the liquid crystal panel to a light-blocking state.
- 2 48. The method of claim 47, wherein the elements nearest the locations of touches of the touchscreen are switched to the light-blocking state.
- 2 49. The method of claim 47, wherein the elements switched to the light-blocking state outline a perimeter of the selected area to scan.
50. The method of claim 49 wherein the perimeter is rectangularized.
- 2 51. A scanner, comprising:
2 means for detecting locations of touches of a touchscreen affixed to one side of the scanner; and
4 means for selecting, based on the touch locations, an area to scan.